. ATENT COOPERATION TREATY

	From the INTERNATIONAL BUREAU		
PCT	То:		
NOTIFICATION OF THE RECORDING OF A CHANGE (PCT Rule 92bis.1 and Administrative Instructions, Section 422) Date of mailing (day/month/year) 18 April 2001 (18.04.01)	ANDRITZ-AHLSTROM OY Patent Department P.O. Box 18 FIN-48601 Karhula FINLANDE		
Applicant's or agent's file reference	IMPORTANT NOTICE ATTOM		
P1518	IMPORTANT NOTIFICATION		
International application No. PCT/FI00/00695	International filing date (day/month/year) 17 August 2000 (17.08.00)		
The following indications appeared on record concerning: X the applicant X the inventor	the agent the common representative		
Name and Address RAHKONEN, Riitta Kuusistontie 37 FIN-57600 Savonlinna Finland	State of Nationality FI Telephone No.		
	Facsimile No. Teleprinter No.		
2. The International Bureau hereby notifies the applicant that the person the name X the ad			
Name and Address RAHKONEN, Riitta Turantie 5 A 3 FIN-48310 Kotka Finland	State of Nationality FI Telephone No. Facsimile No.		
	Teleprinter No.		
3. Further observations, if necessary:			
4. A copy of this notification has been sent to:			
the International Searching Authority the International Preliminary Examining Authority	X the designated Offices concerned the elected Offices concerned		
	other:		
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Jean-Marie McAdams		
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38		

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PCT		From the INTERNATIONAL BUREAU			
		To:			
NOTIFICATION OF THE RECORDING OF A CHANGE (PCT Rule 92bis.1 and Administrative Instructions, Section 422) Date of mailing (day/month/year) 01 November 2001 (01.11.01)		ANDRITZ-AHLSTROM OY Patent Department P.O. Box 500 FIN-48601 Kotka FINLANDE			
Applicant's or agent's file reference					
P1518			IMPORTANT NO	TIFICATION	
International application No. PCT/FI00/00695			onal filing date (day/month/ August 2000 (17.08.00	•	
1. The following indications appeared on record concern	ning:	-			
the applicant the inventor	X	the ager	nt the comm	non representative	
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2. The International Bureau hereby notifies the applicant	that the	e following	change has been recorded	concerning:	
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The International Bureau of WIPO 34, chemin des Colombettes			Jean-Marie I	MCADAMS	
1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740,14,35		Telephone No.: (41,22) 338 83 38			

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PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner **US Department of Commerce**

United States Patent and Trademark

Office, PCT

2011 South Clark Place Room

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Arlington, VA 22202

Priority date (day/month/year)

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20 August 1999 (20.08.99)

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Date of mailing (day/month/year) 14 May 2001 (14.05.01)	in its capacity as elected 0
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PCT/FI00/00695	P1518

Applicant

MATULA, Jouni et al

International filing date (day/month/year)

17 August 2000 (17.08.00)

1.	The designated Office is hereby notified of its election made:
	X in the demand filed with the International Preliminary Examining Authority on:
	08 March 2001 (08.03.01)
	in a notice effecting later election filed with the International Bureau on:
2.	The election X was
	was not
	made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

Charlotte ENGER

Telephone No.: (41-22) 338.83.38

Facsimile No.: (41-22) 740.14.35

UK Patent Application (19) GB (11) 2 231 504(19) A

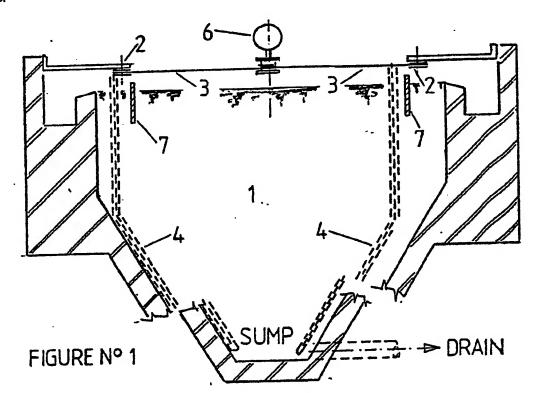
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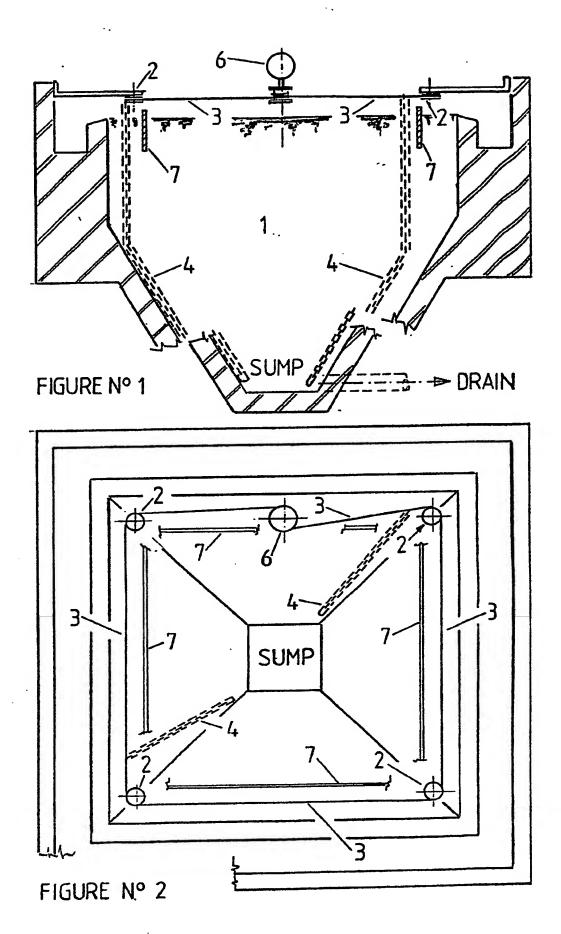
- (21) Application No 8905288.6
- (22) Date of fling 08.03.1989
- (71) Applicant William Brooke Midgley Greenmeadow, Aston By Stone, Staffs, ST15 0BW, **United Kingdom**
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- (56) Documents cited GB 0944625 A GB 1009414 A **GB 1177770 A** GB 0378890 A GB 0486927 A
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(54) Rotary scraper for hopper [pyramidal] bottomed tanks

(57) A settling tank whose lower part is shaped like an inverted pyramid of rectangular cross-section is cleaned by one or more scraper chains 4 hanging down the tank sides from an endless cable 3 which is driven round pulleys 2 at the tank comers.





ROTARY SCRAPER SYSTEM FOR HOPPER (PYRAMIDAL) BOTTOMED TANKS

DESCRIPTION

This invention relates to equipment for scraping deposits from the walls (vertical and sloping) of hopper bottomed (pyramidal) tanks used usually (but not exclusively) as settling tanks at Sewage Treatment Works.

Methods of scraping circular and rectangular tanks are well known, and, until the recent introduction of automatic desludging it has generally been assumed that pyramidal tanks did not require scraping because the angle of the sides was "self-cleaning". However, in the past men have ocassionally walked around a tank dragging a suspended chain around the sides to dislodge sludge. This is very labour intensive and is not often done. This invention is intended to remove deposits from the scraped surfaces by mechanical apparatus.

Treatment processes other than sewage treatment use hopper (pyramidal) bottomed tanks and this method of cleaning may be applied to these processes (eg. paper production).

According to the present invention there are four corner pulleys (or similar guides) which support a wire rope (chain or similar drive). A drive unit is provided to cause the wire rope (or similar) to be driven horizontally. The drive unit may take the place of a corner pulley. From the horizontal wire rope are suspended one or more chains (or similar flexible member) which are of a length to reach nearly to or to the bottom of the tark.

The system may be either hand operated or mechanically driven with, or without automatic controls, as desired.

A specific embodyment of the invention will now be described by way of example with reference to the accompanying drawing in which:-

Figure 1 is a section of a typical Hopper Bottomed Tank.

Figure 2 is a plan of a typical Hopper Bottomed Tank.

Referring to the drawing:-

The tank (1) has in each corner, and supported from the tank structure, a pulley (2) (cr similar device) upon which runs a cable (3) (or similar support) to which is attached a chain (or similar flexible member) (4).

Scum boards (7), or similar obstructions, may determine the siting of the pulleys (2) and the number and arrangement of the pulleys.

The equipment (6) for horizontal driving of the rope (3) (or similar member) is indicated schematically and may be hand operated or motorised. Motorised systems may, if required, include various safety devices to detect tight or slack cables. The position and number of the suspended chains (4) may be dependent upon other equipment in the tanks and this may, in turn, effect the arrangement of pulleys (2).

By operating the equipment the wire rope (or similar) will be driven horizontally and the suspended chains will rotate around the tank internal surfaces dislodging deposits from the tank surfaces into the sump.

The periods between operating cycles will be determined to suit the particular treatment process and may be automatically controlled.

CLAIMS

Claim 1.

A system for scraping Hopper Bottomed (pyramidal) tanks comprising one or more suspended rotating scraper chains (or similar flexible members) and equipment for driving the scraper chains in a rotary motion around the tanks. The driving equipment may or may not be motorised or automated to suit the system requirements.

Claim 2.

A scraper system as claimed in Claim 1 with driving equipment to cause the suspended scraper chains to be driven in a reciprocating motion.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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Savonlinna (FI).

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NL, PT, SE).

(71) Applicant (for all designated States except US): AN-DRITZ-AHLSTROM OY [FI/FI]; Lars Sonckin kaari 12, FIN-02600 Espoo (FI).

(72) Inventors; and

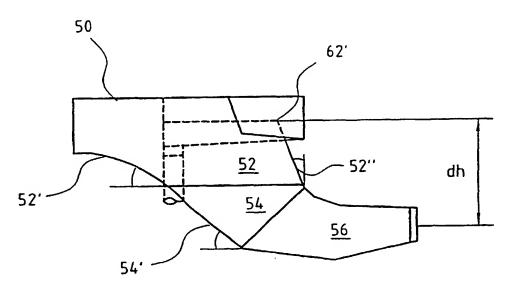
(75) Inventors/Applicants (for US only): MATULA, Jouni

Published:

With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WIRE PIT



(57) Abstract: The present invention relates to a wire pit. A characteristic feature of the wire pit (50) according to the invention is that its wall/walls (52', 52", 54', 62) converge downwards so that the average flow direction of the liquid along the most part of the wire pit's (50) height deviates from vertical.

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REQUEST

 For receiving Office use only PCT/FI 0 0 / 0 0 6 9 5 International Application No. 17 AUG 2000 (17-08- 2000) International Filing Date The Finnish Patent Office **PCT International Application** Name of receiving Office and "PCT International Application"

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty. Applicant's or agent's file reference (if desired) (12 characters maximum) P1518 TITLE OF INVENTION Box No. I "Wire pit" APPLICANT Box No. II Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of S This person is also inventor. of residence is indicated below.) Telephone No. ANDRITZ-AHLSTROM OY Facsimile No. Lars Sonckin kaari 12 FIN-02600 Espoo Teleprinter No. Finland State (that is, country) of residence: State (that is, country) of nationality: the States indicated in the Supplemental Box the United States of America only all designated States except the United States of America all designated States This person is applicant for the purposes of: FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S) Box No. III Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below. This person is: applicant only of residence is indicated below.) applicant and inventor MATULA, Jouni Kuusistontie 5 FIN-57600 Savonlinna inventor only (If this check-box is marked, do not fill in below.) Finland State (that is, country) of residence: State (that is, country) of nationality: FIFI the States indicated in the Supplemental Box the United States all designated States except the United States of America all designated States This person is applicant of America only for the purposes of: Further applicants and/or (further) inventors are indicated on a continuation sheet. AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE Box No. IV common representative The person identified below is hereby/has been appointed to act on behalf agent of the applicant(s) before the competent International Authorities as: Telephone No. Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) +358 5 224 5555 ANDRITZ-AHLSTROM OY Facsimile No. +358 5 224 5339 Patent Department Teleprinter No. P.O. Box 18 FIN-48601 Karhula Finland Address for correspondence: Mark this check-box where no agent or common representative is has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Sheet No. . ?....

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This person is applicant all designated all designated States for the purposes of:	the United States the States indicated in the Supplemental Box		
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